XINYI (CINDY) CAO

Technical Artist ◇ Specializing in Shader Development, AR/VR, & High-Performance Visuals

✉ CindyCaoTA@gmail.com   in linkedin.com/in/cindycaota   🖼 cindy-cao-portfolio.netlify.app   📍 Vancouver

SKILLS

Software: Unity, Unreal, Maya, Blender, Substance Designer, Adobe Photoshop, DaVinci Resolve Studio, Final Cut Pro, Silverstack Lab, Adobe Illustrator, Adobe After Effects, Adobe Premiere Pro, Adobe Lightroom
Technical: Unity ShaderLab, HLSL, C#, C++, Python, Unreal Blueprint, AR/VR, Version Control (Git), Film DIT, MATLAB
Digital Media: Agile, Kanban, User and Market Research, Pipeline Development, Video Editing and Colour Grading

WORK EXPERIENCE

VIRTUAL TECHNOLOGY STAFF at CHINA EDUCATION TELEVISION (CETV)   **Beijing, 07/2021 to 08/2023**
- Acted as the technical point of contact with contractors, coordinating the construction of the virtual studio system framework from initial stages, which was used in *Learning Together*, reaching 180 million students nationwide
- Handled the operation, maintenance, and troubleshooting of the UE4 virtual studio system, ensuring 100% uptime for live broadcasts. Developed technical standards to ensure the reliability of flagship programs like *E-sport News* (CETV-4)

Tools and Skillset: Unreal Engine, Kanban

TECHNICAL ARTIST INTERN at PERFECT WORLD   **Beijing, 04/2019 to 12/2020**
- Collaborated with senior technical artists to optimize the graphics performance of the *Perfect World* mobile game and other in-development titles, implementing 30+ new shader visual effects and functionalities, based on artists' requests
- Resolved 10+ technical issues presented by the art team, ensuring bug-free graphical performance and smoother gameplay
- Optimized performance and reduced build size by refining shaders, implementing LOD, and addressing resource constraints
- Created 14 in-game cinematic cutscenes for *Perfect World* expansion packs, supporting App Store marketing strategies

Tools and Skillset: Unity, ShaderLab, HLSL, Built-in Render Pipeline, Universal Render Pipeline (URP), TortoiseSVN, Substance Designer, PBR, Lighting, Post-Processing, Performance Optimization, Computer Graphics

MARKET AND USER RESEARCH INTERN at TENCENT   **Remote, 10/2019 to 04/2020**
- Researched about game, film, TV, and pan-entertainment market trends, independently completed 13 forecasting reports
- Researched overseas game and user preferences, presenting insights on UI differences to enhance user-centered design
- Monitored App Store game lists with Python, gathered data on top-performing games, and produced reports with insights

Tools and Skillset: User Research, User Test, Market Research, Python

SCHOOL × INDUSTRY PROJECTS

TECHNICAL ARTIST and DEVELOPER for SIGNALS HOST at DIGIBC and VIFF   **Vancouver, 05/2024 to 08/2024**
- Collaborated to develop an engaging virtual host solution for the SIGNALS event, showcasing AI and MR technology
- Directed 3D pipeline management; facilitated team communication with 3D artist and developers. Used profiler tools to analyze optimization bottlenecks, reducing shader variants and texture size, achieving an 11% reduction in memory usage
- Implemented the AR solution using Unity WebGL and Web AR; conducted stress tests and created technical documentation

Tools and Skillset: Agile, Unity, WebGL, Web AR, AI, Chat GPT - 4o, TTS, Performance Optimization

TECHNICAL ARTIST for SANDSCAPE at BC CHILDREN'S HOSPITAL DIGITAL LAB   **Vancouver, 01/2024 to 04/2024**
- Collaborated to develop a digital sandtray therapy platform in Unity, using an agile and user-centered approach
- Led the integration and optimization of 8 environments and 132 separate 3D assets (miniatures), working closely with the 3D artist and developers to ensure seamless Unity deployment
- Developed and implemented custom shaders, post-processing, and VFX to enhance visual engagement and immersion

Tools and Skillset: Agile, Unity, WebGL, ShaderLab

VFX ARTIST at VFX CREATION CAMP at NETEASE and CHINA ACADEMY OF ART   Remote, 07/2020 to 08/2020
- Created high-quality game special effects using ShaderGraph and particle systems in Unity HDRP for ThunderFire Studio

Tools and Skillset: Unity, High Definition Render Pipeline (HDRP), ShaderGraph, VFX, Photoshop

EDUCATION

Simon Fraser University: Master of Digital Media (M.DM.) at Centre for Digital Media, Dec 2024
Beijing Film Academy: Master of Art (M.A.) in Film Studies at Department of Film Technology, June 2021
Beijing University of Posts and Telecommunications: Bachelor of Engineering (B.Eng.) in Digital Media Technology, June 2018